

Appendix 2

Road Cards

Appendix 2

Road Cards

Introduction to Road Management Objectives

Purpose and Use

The road management objectives (RMOs) presented in this appendix establish the intended purpose and display design maintenance and operation criteria (as per FSH 7709.55) for each National Forest System road in the Central Kupreanof Timber Harvest project area. The information on the RMO form is part of a permanent database that can be updated periodically as access needs, issues, and budgets change. Proposed new roads and existing roads with planned reconstruction or maintenance have additional information with site-specific design criteria that will be used during design, construction, and initial monitoring of any road work proposed in this document. The road segments are described using mileposts (MP) as beginning and ending points (Beginning milepost = Bmp; Ending milepost = Emp). Lengths are given in miles (mi). Road width is given in feet. Culverts are identified as cmp. Proposed new roads and existing roads with planned reconstruction or maintenance each have an individual map.

General Design Criteria

The general design criteria provide various descriptions of the type of road and the intended purpose and future use of the road. From this information, the maintenance and operation criteria can be developed. All Central Kupreanof Timber Harvest roads are constructed and maintained for silvicultural purposes, and will apply the practices described in BMP 12.5. Therefore, they meet the criteria for a silvicultural exemption from permitting under the Clean Water Act Section 404. General Design Criteria and Elements are shown on the Road Management Objectives portion of the road cards and are defined as follows:

Functional Class: Local (L), Collector (C), and Arterial (A) classifications

Service Life: Long (L) or Short (S), Constant (C) or Intermittent (I)

Maintenance Criteria

The maintenance criteria include a discussion of how the road is to be maintained, centering on three strategies:

Active: provide frequent cleanout of ditches and catch basins to ensure controlled drainage. Control roadside brush to maintain sight distance. Grade as needed to maintain crown and running surface.

Storm Proof: provide water bars, rolling dips, out sloping, etc., to ensure controlled runoff until any needed maintenance can be performed on the primary drainage system. Control roadside brush to maintain passage.

Storage: remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, revegetate.

The active maintenance strategy is applied to roads that are open and maintained for travel by a prudent driver in a standard passenger car. User

comfort and convenience are not considered priorities. These roads are assigned Maintenance Level 3. The active maintenance strategy will also at times be applied to roads intended only for use by high-clearance vehicles, or Maintenance Level 2 roads. This will usually be the case when log haul is expected in the near future.

An intermediate maintenance strategy is to storm proof, or to stabilize the road by providing roadway features such as drivable water bars and out sloping to control runoff in case the primary drainage system of culverts and ditches is overwhelmed during a storm event. Each culvert will be evaluated as to where the water will go if the culvert were to fail to carry the high flow. A water bar or out slope at this location will minimize the potential for erosion of long stretches of ditch line or roadway. This is intended to be the primary maintenance strategy applied to roads assigned Maintenance Level 2.

Storage is intended to be the primary maintenance strategy on intermittent use roads during their closure cycle. Road storage is defined in FSH 5409.17 as “the process/action of closing a road to vehicle traffic and placing it in a condition that requires minimum maintenance to protect the environment and preserve the facility for future use.” In this strategy, the bridges and culverts on live streams may be completely removed to restore natural drainage patterns. Cross drains and ditch relief culverts will be bypassed with deep water bars, but may be left in place to minimize the cost of re-using these roads in the future. Roads in storage are left in a self-maintaining state in order to use more road maintenance funds on the open drivable roads on the island. Maintenance Level 1, closure and basic custodial maintenance, is assigned.

The interdisciplinary team went through a process defining road management considerations will lead to the maintenance strategy to be applied to each road in the project area. The road cards show the desired future condition of each road in the project area as a result of the process. The work needed to meet the objectives can be accomplished on the roads along the haul route in resultant contracts. Work needed on other roads to meet the desired objective will be scheduled as funding allows.

Operations Criteria

The operations criteria include a presentation of each of the five traffic management strategies identified in FSM 7731 (encourage, accept, discourage, prohibit, and eliminate) to be applied to different traffic classes on each road. The traffic management narrative describes what actions will be taken in order to apply each strategy. For example, if the strategy “eliminate” is prescribed for standard passenger and high-clearance vehicles, the narrative describes the method to accomplish this, such as removal of stream crossing. Traffic management strategies for the NFS roads are displayed on the Road Management Objectives (road cards).

Site-Specific Design Criteria

The site-specific design criteria section includes road location objectives, wetland information, erosion control, proposed rock borrow sources, and all streams within the project area with proposed construction or rehabilitation of stream crossing structures. Log stringer bridges will be the preferred method of

stream crossing on all Class III unless site conditions warrant a different crossing structure. Use of bridges will reduce or eliminate impacts on streams from fill material on streams necessary for culvert installations and the impacts from the subsequent removal of the culverts when the roads are put in to storage.

Prior to actual construction of roads and stream crossings, the final location, structure type, and design criteria are designed to meet all applicable Forest Plan Standards and Guidelines, Forest Service Manual and Handbooks, best management practices and MOUs with Alaska Department of Fish and Game (when applicable).

Best management practices (BMPs) are used to ensure soil and water resources are considered in transportation planning activities.

Operational and Objective Maintenance Levels

Operational Maintenance Levels indicate the level of road maintenance, either Maintenance Level 2 or 3, during sale-related activities. Objective Maintenance Levels indicate the long-term maintenance plan for the roads as described in the following definitions. Maintenance Levels (MLs) discussed in the Road Management Objectives (RMOs) include Maintenance Level 1, 2, and 3. The definitions for maintenance levels are from the Forest Service Handbook 7709.58. The purpose of the ML is to define the level of service provided by, and maintenance required for, a specific road or segment.

Maintenance Level 1

Assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period must exceed one year. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Appropriate traffic management strategies are "prohibit" and "eliminate." Roads are closed by barrier, bridge removal or organic encroachment and are monitored for resource protection.

Maintenance Level 2

Assigned to roads open for use by high-clearance vehicles. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or other specialized uses. Log haul may occur at this level. Appropriate traffic management strategies are either to (1) discourage or prohibit passenger cars or (2) accept or discourage high-clearance vehicles.

Maintenance Level 3

Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car and are subject to the provisions of the Highway Safety Act. Some roads may be fully surfaced with either native or processed material. Appropriate traffic management strategies are either "encourage" or "accept." "Discourage" or "prohibit" strategies may be employed for certain classes of vehicles or users.

AFRPA Status

AFRPA Class

Alaska Forest Resources and Practices Act (AFRPA): Under this Act, all roads will be maintained as "Active" during harvest-related activities. After these activities are completed, the AFRPA classes on the road cards will be implemented. These classes include:

Active: A forest road actively used for hauling logs, pulpwood, chips, or other major forest products, or rock and other road-building materials.

Inactive: A forest road on which commercial hauling is discontinued for one or more logging seasons, and the forest landowner desires continuation of access for fire control, forest management activities, occasional or incidental use for forest products harvesting, or similar activities.

Closed: A road is closed when the following activities have been completed: a road is outloped or waterbarred, or is left in a condition suitable to control erosion. The ditches are also left in a condition suitable to control erosion, and bridges, culverts, and fills are removed from surface waters.

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Road Management Objective

Project		System		Land Use Designation	
Central Kupreanof EIS		Kake			
Route No	Route Name	Begin Terminus		End Terminus	
6000	Seal Point	MP 6.21 Road 6040		TTF	
Begin MP	Length	Status	Map Quarter Quad	Photo year, roll, photos	
0.00	1.032	Existing	PBGD6		

General Design Criteria and Elements

Functional Class	Service Life	Surface	Width	Design Speed	Critical Vehicle	Design Vehicle
Local	LI	Shot rock	16'	20	Log truck	Log truck

Intended Purpose/Future Use

Access for LTF.

Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Condition)
0.00	1.032	2	2

Maintenance Narrative

Road will be maintained to facilitate travel by pickup truck at 20 mph. All culverts, ditches and drainage structures will be serviced, and road brushed.

Operation Criteria

Highway Safety Act: No **Jurisdiction:** National Forest System ownership

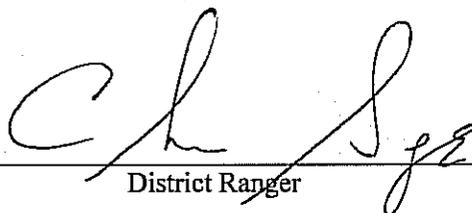
Traffic Management Strategies

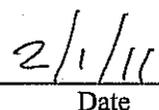
- Encourage:** Hikers, bicycles
- Accept:** High-clearance vehicles
- Discourage:** N/A
- Prohibit:** N/A
- Eliminate:** N/A

Travel Management Narrative

Road will remain open to high-clearance vehicles.

Approved


 District Ranger


 Date

Road Management Objective

Project		System		Land Use Designation
Central Kupreanof EIS		Kake		
Route No	Route Name	Begin Terminus		End Terminus
6328	Jasper High	MP 3.96 Road 6314		Jnct 6314 & 6315
Begin MP	Length	Status	Map Quarter Quad	Photo year, roll, photos
0.00	7.844	Existing	PBGD5	

General Design Criteria and Elements

Functional Class	Service Life	Surface	Width	Design Speed	Critical Vehicle	Design Vehicle
Local	LI	Shot rock	16'	30	Lowboy	Lowboy

Intended Purpose/Future Use

Serves as part of mainline road system.

Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Condition)
0.00	7.844	3	3

Maintenance Narrative

Road will be maintained to facilitate travel by passenger car at 30 mph. All culverts, ditches and drainage structures will be serviced and road brushed.

Operation Criteria

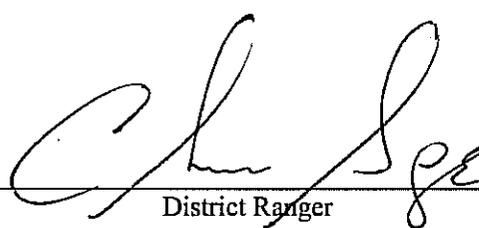
Highway Safety Act: Yes **Jurisdiction:** National Forest System ownership

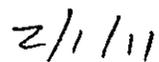
Traffic Management Strategies

Encourage:	Hikers, bicycles
Accept:	All motorized vehicles
Discourage:	N/A
Prohibit:	N/A
Eliminate:	N/A

Travel Management Narrative

Road will remain open to all traffic.

Approved  District Ranger

 Date

Road Management Objective

Project		System		Land Use Designation	
Central Kupreanof EIS		Kake			
Route No	Route Name	Begin Terminus		End Terminus	
6333	Nice	MP 4.16 Road 6326		Section 14	
Begin MP	Length	Status	Map Quarter Quad	Photo year, roll, photos	
0.00	1.61	Existing			

General Design Criteria and Elements

Functional Class	Service Life	Surface	Width	Design Speed	Critical Vehicle	Design Vehicle
Local	I	Shot rock	14'	10	Log truck	Log truck

Intended Purpose/Future Use

Access for silvicultural activities. Road should remain open for the first 1.434 miles.

Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Condition)
0.00	1.61	2	1

Maintenance Narrative

Road will be maintained to facilitate travel for pickup truck at 10 mph. All culverts, ditches and drainage structures will be serviced, and road brushed on this portion.

Operation Criteria

Highway Safety Act: No **Jurisdiction:** National Forest System ownership

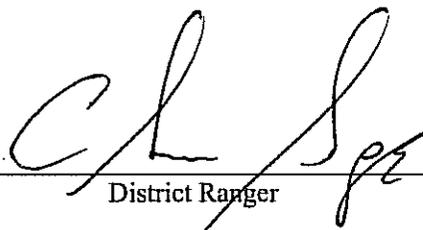
Traffic Management Strategies

Encourage:	Hikers, bicycles
Accept:	High-clearance vehicles
Discourage:	N/A
Prohibit:	N/A
Eliminate:	N/A

Travel Management Narrative

Maintain as Maintenance Level 2. Close road when funds are available. Road closure may include any combination of closure devices at the beginning of the road, pulling some or all drainage structures such as culverts, and/or gating. This road will be further evaluated for the most effective and efficient closure method prior to implementation.

Approved _____


District Ranger

2/1/11

Date

Road Management Objective

Project		System		Land Use Designation
Central Kupreanof EIS		Kake		
Route No	Route Name	Begin Terminus		End Terminus
6326	Marble Knobs	MP 1.93 Road 6314		Section 18
Begin MP	Length	Status	Map Quarter Quad	Photo year, roll, photos
0.00	8.076	Existing		

General Design Criteria and Elements

Functional Class	Service Life	Surface	Width	Design Speed	Critical Vehicle	Design Vehicle
Local	LI	Shot rock	14'	10	Log truck	Log truck

Intended Purpose/Future Use
Access for silvicultural activities.

Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Condition)
0.00	8.076	2	2

Maintenance Narrative

Road will be maintained to facilitate travel by pickup truck at 10 mph. All culverts, ditches and drainage structures will be serviced, and road brushed.

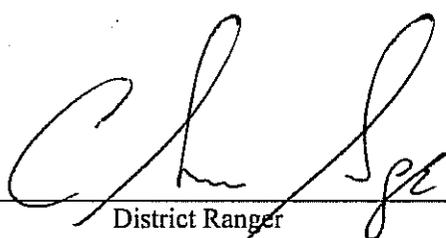
Operation Criteria

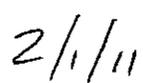
Highway Safety Act: No **Jurisdiction:** National Forest System ownership

Traffic Management Strategies:
Encourage: Hikers, bicycles
Accept: High-clearance vehicles
Discourage: N/A
Prohibit: N/A
Eliminate: N/A

Travel Management Narrative

Road will remain open to high-clearance vehicles.

Approved  District Ranger

 Date

Road Management Objective

Project		System		Land Use Designation
Central Kupreanof EIS		Kake		
Route No	Route Name	Begin Terminus		End Terminus
6339	Notch	MP 0.92 Road 6334		Section 25
Begin MP	Length	Status	Map Quarter Quad	Photo year, roll, photos
0.00	1.71	Existing		

General Design Criteria and Elements

Functional Class	Service Life	Surface	Width	Design Speed	Critical Vehicle	Design Vehicle
Local	LI	Shot rock	14'	10	Log truck	Log truck

Intended Purpose/Future Use

Access for silvicultural activities.

Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Condition)
0.00	1.71	2	2

Maintenance Narrative

Road will be maintained to facilitate travel by pickup truck at 10 mph. All culverts, ditches and drainage structures will be serviced, and road brushed.

Operation Criteria

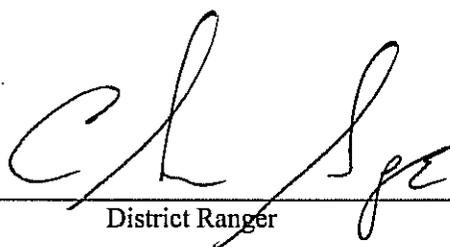
Highway Safety Act: No Jurisdiction: National Forest System ownership

Traffic Management Strategies	Encourage:	Hikers, bicycles
	Accept:	High-clearance vehicles
	Discourage:	N/A
	Prohibit:	N/A
	Eliminate:	N/A

Travel Management Narrative

Road will remain open to high-clearance vehicles.

Approved



District Ranger

2/1/11

Date

Road Management Objective

Project		System		Land Use Designation	
Central Kupreanof EIS		Kake			
Route No	Route Name	Begin Terminus		End Terminus	
6040	Kake Road	Kake Portage Jnct		Section 27	
Begin MP	Length	Status	Map Quarter Quad	Photo year, roll, photos	
0.00	17.138	Existing	PBGD6		

General Design Criteria and Elements

Functional Class	Service Life	Surface	Width	Design Speed	Critical Vehicle	Design Vehicle
Local	LI	Shot rock	16'	30	Lowboy	Lowboy

Intended Purpose/Future Use

Serves as part of mainline road system to MP 12.33

Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Condition)
0.00	12.33	3	3
12.33	17.138	2	2

Maintenance Narrative

Road will be maintained to facilitate travel by passenger car at 30 mph to MP 12.33, high-clearance vehicles to end. All culverts, ditches and drainage structures will be serviced and road brushed.

Operation Criteria

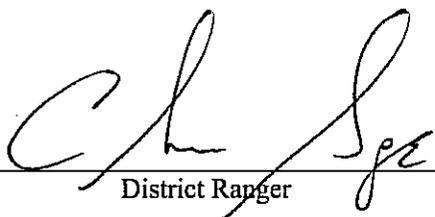
Highway Safety Act: Yes **Jurisdiction:** National Forest System ownership

Traffic Management Strategies:
Encourage: Hikers, bicycles
Accept: All motorized vehicles
Discourage: N/A
Prohibit: N/A
Eliminate: N/A

Travel Management Narrative

Road will remain open to all traffic for first 12.33 miles, to high-clearance vehicles to end.

Approved _____


 District Ranger

2/1/11

 Date

Road Management Objective

Project		System		Land Use Designation
Central Kupreanof EIS		Kake		
Route No	Route Name	Begin Terminus		End Terminus
6330	Marble Knobs South	MP 1.22 Road 6326		Section 8
Begin MP	Length	Status	Map Quarter Quad	Photo year, roll, photos
0.00	0.86	Existing/ Reconstruction	PBGD5	

General Design Criteria and Elements

Functional Class	Service Life	Surface	Width	Design Speed	Critical Vehicle	Design Vehicle
Local	LI	Shot rock	14'	10	Log truck	Log truck

Intended Purpose/Future Use

Access for silvicultural activities. Close road until needed in the future.

Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Condition)
0.00	0.860	2	1

Maintenance Narrative

Road will be maintained to facilitate travel pickup truck at 10 mph. All culverts, ditches and drainage structures will be serviced, and road brushed.

Operation Criteria

Highway Safety Act: No **Jurisdiction:** National Forest System ownership

Traffic Management Strategies
Encourage: Hikers, bicycles
Accept: High-clearance vehicles when open section
Discourage: N/A
Prohibit: Motorized vehicles
Eliminate: Motorized vehicles

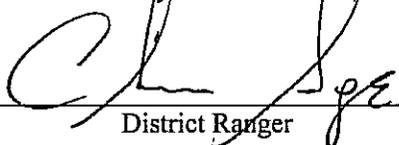
Travel Management Narrative

Road side vegetation and alders have started to close the road. Road requires additional drainage structures. It will need reconstruction done prior to use. Reconstruction would require brushing, cleaning of alders, and drainage structures.

Closure will remove all culverts on live streams, helping restore natural drainage patterns. Cross drains and ditch relief culverts would be bypassed with deep water bars to minimize the cost of re-using these roads in the future. This road would remain in a self-maintaining state.

Intermittent service road during the time they are closed to vehicular traffic. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. May be open and suitable for non-motorized uses.

Approved _____


 District Ranger

2/1/11
 Date

Road Management Objective

Project		System		Land Use Designation	
Central Kupreanof EIS		Kake			
Route No	Route Name	Begin Terminus		End Terminus	
45807		MP 0.15 Road 45808			
Begin MP	Length	Status	Map Quarter Quad	Photo year, roll, photos	
0.00	0.21	Existing/ Reconstruction			

General Design Criteria and Elements

Functional Class	Service Life	Surface	Width	Design Speed	Critical Vehicle	Design Vehicle
Local	LI	Shot rock	14'	10	Log truck	Log truck

Intended Purpose/Future Use

Access for silvicultural activities. Close road until needed in the future.

Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Condition)
0.00	0.2	2	1
0.21	0.594	1	1

Maintenance Narrative

Verify that road is properly closed. All reconstructed roads will be managed as a Maintenance Level 2 open to motorized vehicle traffic during the life of these timber sale activities. They may remain open after this timber sale for other activities including firewood removal; these roads would be constructed or placed in a self maintaining hydrologic status. This will include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

Operation Criteria

Highway Safety Act: No **Jurisdiction:** National Forest System ownership

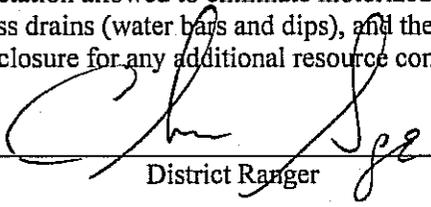
Traffic Management Strategies	Encourage:	Hikers, bicycles
	Accept:	High-clearance vehicles when open section
	Discourage:	N/A
	Prohibit:	Motorized vehicles
	Eliminate:	Motorized vehicles

Travel Management Narrative

Part of this road is currently in storage, from Mp 0.2 to 0.31. Most drainage structures have been removed to restore natural drainage pattern. Road has re-vegetated with alder 4" to 8" in diameter. This road needs reconditioning done prior to use, requiring brushing, clearing of alder and drainage structures replaced.

This road will be on intermittent service road (Maintenance Level 1) after timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures will remain in place with additional cross drains (water bars and dips), and the road will be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved


District Ranger

2/1/11
Date

Road Management Objective

Project		System		Land Use Designation	
Central Kupreanof EIS		Kake			
Route No	Route Name		Begin Terminus		End Terminus
6327			6327 MP 1.12		
Begin MP	Length	Status	Map Quarter Quad		Photo year, roll, photos
1.12	1.07	Planned			

General Design Criteria and Elements

Functional Class	Service Life	Surface	Width	Design Speed	Critical Vehicle	Design Vehicle
Local	LI	Shot rock	14'	10	Log truck	Log truck

Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Condition)
1.12	2.19	2	1

Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

AFR&P Regs. "Active" status: Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

AFR&P Regs. "Inactive" status: Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

Operation Criteria

Highway Safety Act: No **Jurisdiction:** National Forest System ownership

Traffic Management Strategies	Encourage:	Hikers, bicycles
	Accept:	High-clearance vehicles
	Discourage:	N/A
	Prohibit:	N/A
	Eliminate:	Motorized vehicles on closed section

Travel Management Narrative

All newly constructed NFS road will be managed as a Maintenance Level 2 open to motorized vehicle traffic during the life of these timber sale activities. This road may remain open after this timber sale for other activities including firewood removal; it will be constructed or placed in a self maintaining hydrologic status. This will include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

This road will be an intermittent service road (Maintenance Level 1) after timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures will remain in place with additional cross drains (water bars and dips), and the road will be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved _____

District Ranger

Date

2/1/11

Road Management Objective

Project		System		Land Use Designation
Central Kupreanof EIS		Kake		
Route No	Route Name	Begin Terminus	End Terminus	
45885		6326 MP 7.04		
Begin MP	Length	Status	Map Quarter Quad	Photo year, roll, photos
0.00	0.09	Planned		

General Design Criteria and Elements

Functional Class	Service Life	Surface	Width	Design Speed	Critical Vehicle	Design Vehicle
Local	LI	Shot rock	14'	10	Log truck	Log truck

Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Condition)
0.00	0.09	2	1

Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

AFR&P Regs. "Active" status: Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

AFR&P Regs. "Inactive" status: Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

Operation Criteria

Highway Safety Act: No **Jurisdiction:** National Forest System ownership

Traffic Management Strategies

Encourage:	Hikers, bicycles
Accept:	High-clearance vehicles
Discourage:	N/A
Prohibit:	N/A
Eliminate:	Motorized vehicles on closed section

Travel Management Narrative

All newly constructed NFS road will be managed as a Maintenance Level 2 open to motorized vehicle traffic during the life of these timber sale activities. The road may remain open after this timber sale for other activities including firewood removal; it will be constructed or placed in a self maintaining hydrologic status. This will include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

These road will be an intermittent service roads (Maintenance Level 1) after timber sale activities and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures will remain in place with additional cross drains (water bars and dips), and the road will be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved _____

District Ranger

2/1/11

Date

Site Specific Design Criteria

Road 45885

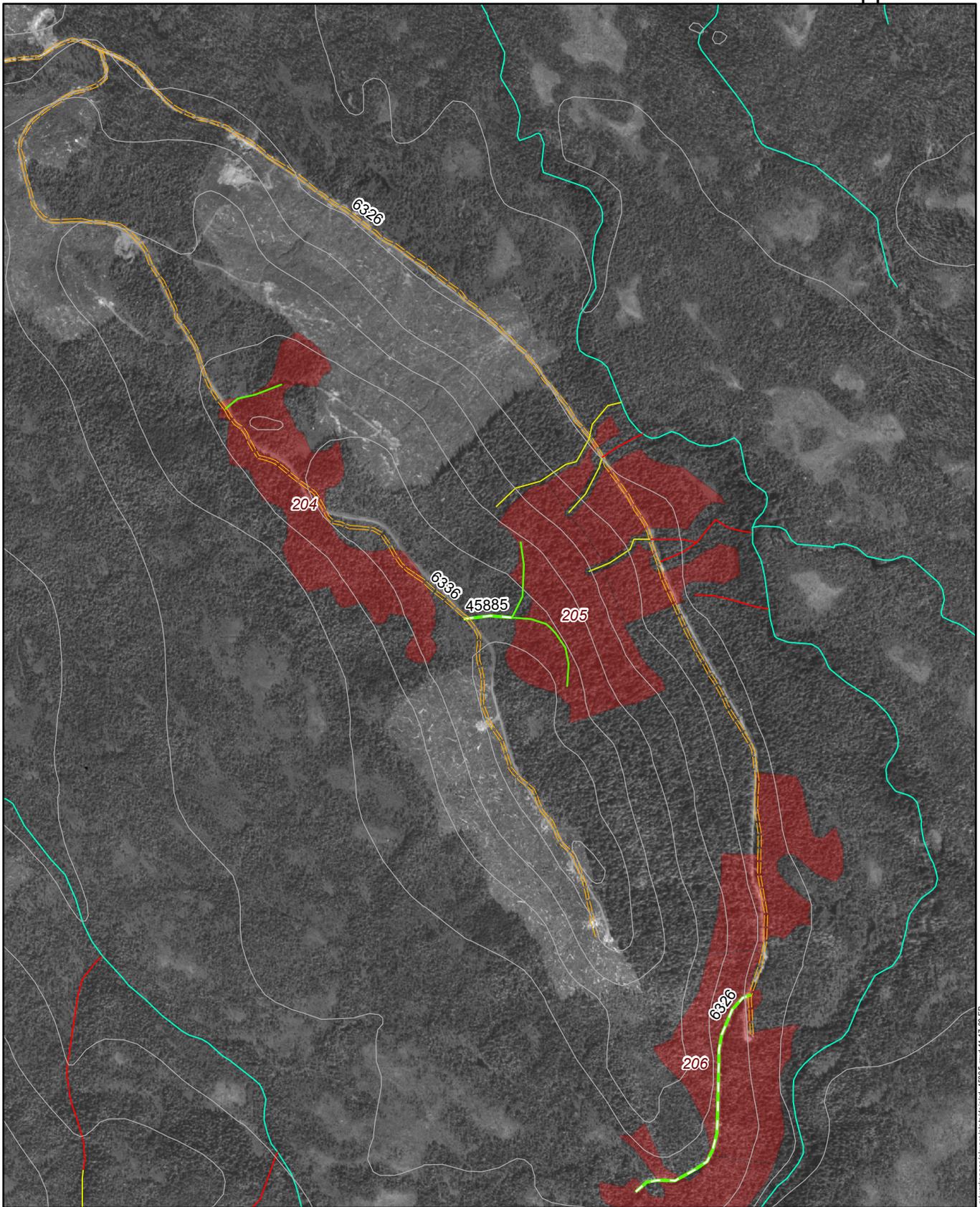
ROAD LOCATION: The road is located on fairly flat ground which slopes downhill at approximately 5 percent grade through timber.

WETLANDS: The proposed road does not cross wetland.

EROSION CONTROL: An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

ROCK PITS: Possible rock pit is located on 6326 at MP 5.63. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

STREAM CROSSINGS: There are no major stream crossings on proposed road.



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Legend

- Proposed Unit
- Road Suitable for Passenger Vehicles (ML3)
- High Clearance Vehicle Road (ML2)
- Basic Custodial Care (Closed Road) (ML1)
- New NFS Designated Road Construction (ML2)
- Reconstructed Road
- New Temporary Road Construction
- Contours 100 ft.
- Stream Class I
- Stream Class II
- Stream Class III

Road 45885



Site Specific Design Criteria

Road 45891

ROAD LOCATION: The road steadily gains elevation between the beginning point at the existing Road 6328. The first 23+00 feet is a steady climb at 15 percent through timber with 50 percent sideslopes. A 20 foot deep V- notch is crossed at 10+50 feet; a 40 foot bridge may be required. At 12+00 a stream is crossed; a 36 inch pipe may be required. At 20+80 feet a stream is crossed, a 36 inch pipe may be required. From 21+00 to end the road continues to climb at 15% through timber with 70 percent sideslopes.

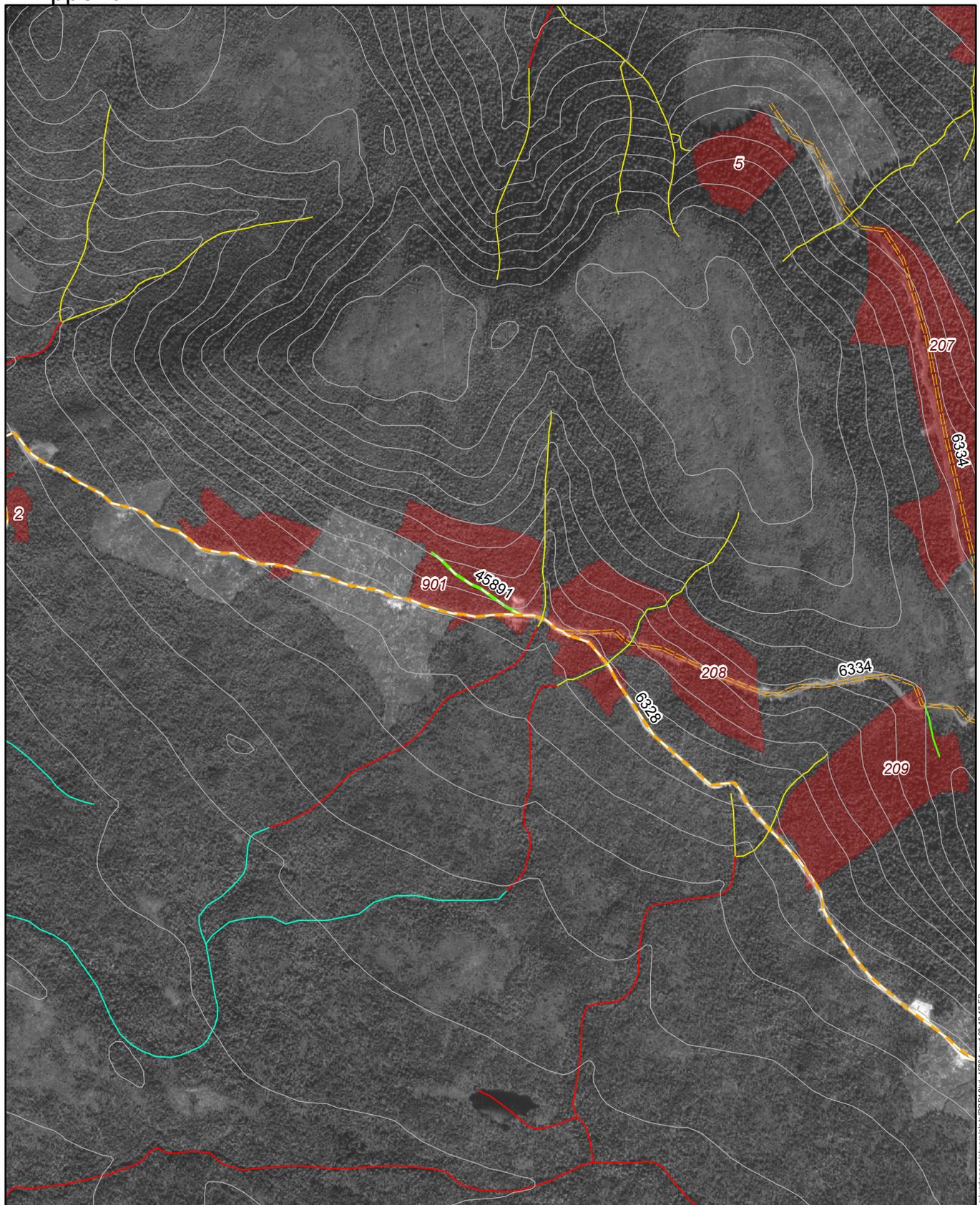
WETLANDS: The proposed road does not cross any wetland.

SOILS: A slope stability investigation will be completed by a soil specialist prior to implementation in areas where the proposed road crosses side slopes greater than 67 percent. The on-site investigation will follow Forest Plan protocols.

EROSION CONTROL: An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

ROCK PITS: Possible rock pit is located at beginning of road at intersection with 6328. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6).

STREAM CROSSINGS: There are three Class IV stream crossings at stations 10+50, 12+00, and 20+80 that may require site-specific design consideration for volume of flow, fish habitat, or other design complexity due to stream incision. Follow BMP 14.14, 14.17 to minimize stream channel disturbances and related sediment production.



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Legend

- Proposed Unit
- Road Suitable for Passenger Vehicles (ML3)
- High Clearance Vehicle Road (ML2)
- Basic Custodial Care (Closed Road) (ML1)
- New NFS Designated Road Construction (ML2)
- Reconstructed Road
- New Temporary Road Construction
- Contours 100 ft.
- Stream Class I
- Stream Class II
- Stream Class III

Road 45891



Road Management Objective

Project		System		Land Use Designation	
Central Kupreanof EIS		Kake			
Route No	Route Name	Begin Terminus		End Terminus	
6326		6339 MP 8.08		8.58	
Begin MP	Length	Status	Map Quarter	Quad	
8.10	0.48	Planned			
				Photo year, roll, photos	

General Design Criteria and Elements

Functional Class	Service Life	Surface	Width	Design Speed	Critical Vehicle	Design Vehicle
Local	LI	Shot rock	14'	10	Log truck	Log truck

Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Condition)
8.10	8.58	2	1

Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

AFR&P Regs. "Active" status: Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

AFR&P Regs. "Inactive" status: Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

Operation Criteria

Highway Safety Act:	No	Jurisdiction:	National Forest System ownership
Traffic Management Strategies	Encourage:	Hikers, bicycles	
	Accept:	High-clearance vehicles	
	Discourage:	N/A	
	Prohibit:	N/A	
	Eliminate:	Motorized vehicles on closed section	

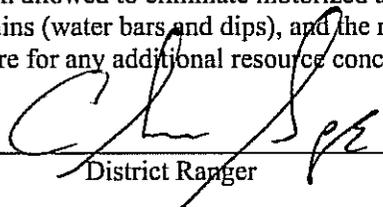
Travel Management Narrative

Road 6326 was part of the North Irish Timber Sale NEPA document. The 0.5 portion proposed for new NFS construction in Central Kupreanof was built as a temporary road in North Irish and therefore does not show up on the USFS GIS roads layer. The adjacent unit was not harvested in North Irish and the section of temp road was coded as decommissioned.

All newly constructed NFS road will be managed as a Maintenance Level 2 open to motorized vehicle traffic during the life of these timber sale activities. It will be constructed or placed in a self maintaining hydrologic status. This will include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

This road will be an intermittent service road (Maintenance Level 1) after timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures will remain in place with additional cross drains (water bars and dips), and the road will be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved _____



District Ranger

2/1/11
Date

Site Specific Design Criteria

Road 6326

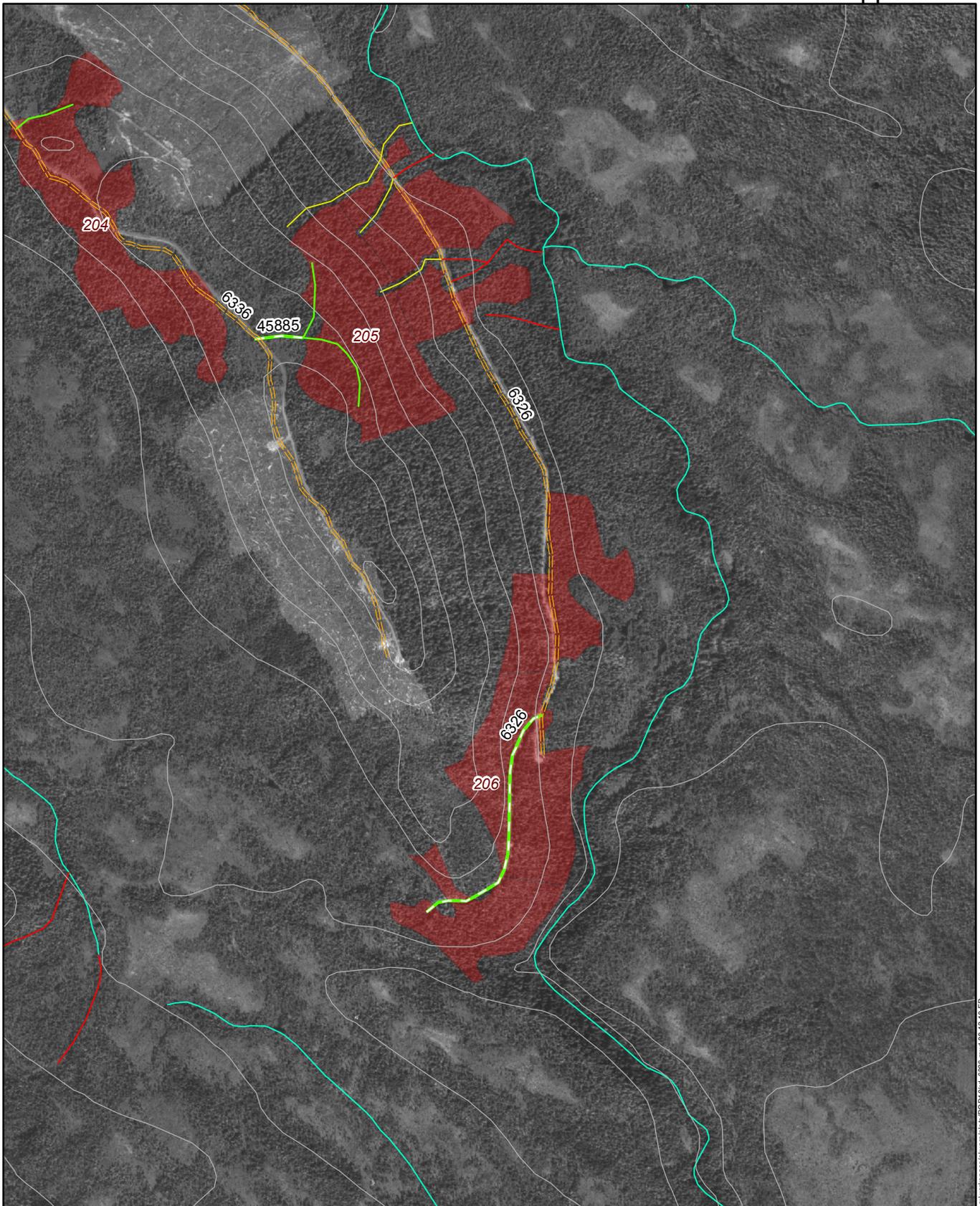
ROAD LOCATION: The road location is rolling along the contour with no appreciable gain in elevation with 30 to 50 percent sideslopes, also going through timber.

WETLANDS: The proposed road does not cross any wetland.

EROSION CONTROL: An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8).

ROCK PITS: Possible rock pit is located at 5.60 of existing road 6326. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

STREAM CROSSINGS: There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.



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Legend

- Proposed Unit
- Road Suitable for Passenger Vehicles (ML3)
- High Clearance Vehicle Road (ML2)
- Basic Custodial Care (Closed Road) (ML1)
- New NFS Designated Road Construction (ML2)
- Reconstructed Road
- New Temporary Road Construction
- Contours 100 ft.
- Stream Class I
- Stream Class II
- Stream Class III

Road 6326



Road Management Objective

Project		System		Land Use Designation	
Central Kupreanof EIS		Kake			
Route No	Route Name	Begin Terminus		End Terminus	
45888		6040 MP 13.60			
Begin MP	Length	Status	Map Quarter Quad	Photo year, roll, photos	
0.00	0.36	Planned			

General Design Criteria and Elements

Functional Class	Service Life	Surface	Width	Design Speed	Critical Vehicle	Design Vehicle
Local	LI	Shot rock	14'	10	Log truck	Log truck

Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Condition)
0.00	0.36	2	1

Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

AFR&P Regs. "Active" status: Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

AFR&P Regs. "Inactive" status: Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

Operation Criteria

Highway Safety Act: No **Jurisdiction:** National Forest System ownership

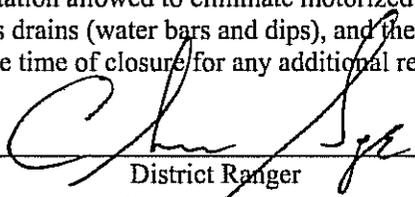
Traffic Management Strategies	Encourage:	Hikers, bicycles
	Accept:	High-clearance vehicles
	Discourage:	N/A
	Prohibit:	N/A
	Eliminate:	Motorized vehicles on closed section

Travel Management Narrative

All newly constructed NFS road will be managed as a Maintenance Level 2 open to motorized vehicle traffic during the life of these timber sale activities. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

This road will be an intermittent service road (Maintenance Level 1) after timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures will remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved _____


District Ranger

2/1/11
Date

Site Specific Design Criteria

Road 45888

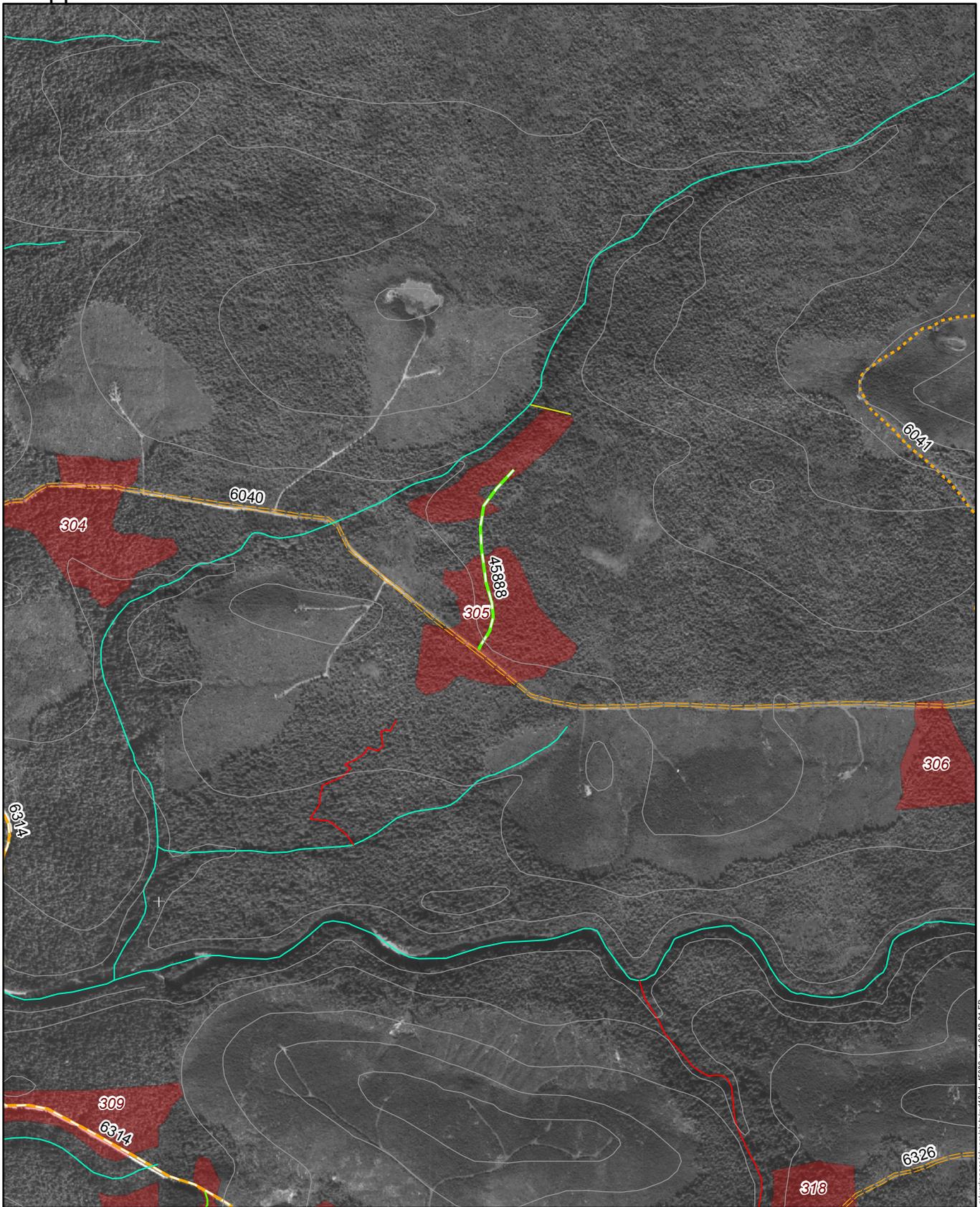
ROAD LOCATION: The road is located on flat timbered area north of existing Road 6040. The first 13+00 feet is flat and no sideslope through timber. The remainder of the road location is rolling along the contour with no appreciable gain in elevation with 20 to 30 percent sideslopes, also going through timber.

WETLANDS: The proposed road crosses about 137 feet of forested wetland. Minimize the road footprint through the wetlands and provide adequate hillslope drainage (33 CFR BMPs 1, 3). Wetlands were unavoidable on some portions of the location due to safety, engineering design constraints and consideration for other resources. Alternatives to the proposed location on wetlands would mean higher cost roads that may impact similar areas of wetlands (BMP 14.2). Overlay construction is recommended to minimize disturbance to the wetland and ensure hydraulic connectivity of the roaded wetland with the surrounding areas (BMP 12.5 and 14.17). This road meets silviculture exemption for 404 permitting through Army Corps of Engineers.

EROSION CONTROL: An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

ROCK PITS: Possible rock pit is located west of road intersection 6040 @ MP 12.40. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

STREAM CROSSINGS: There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.

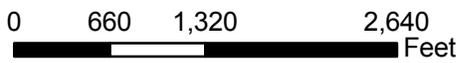


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Legend

- Proposed Unit
- Road Suitable for Passenger Vehicles (ML3)
- High Clearance Vehicle Road (ML2)
- Basic Custodial Care (Closed Road) (ML1)
- New NFS Designated Road Construction (ML2)
- Reconstructed Road
- New Temporary Road Construction
- Contours 100 ft.
- Stream Class I
- Stream Class II
- Stream Class III

Road 45888



Road Management Objective

Project		System		Land Use Designation	
Central Kupreanof EIS		Kake			
Route No	Route Name		Begin Terminus		End Terminus
45889			MP 4.15 Road 6326		
Begin MP	Length	Status	Map Quarter Quad		Photo year, roll, photos
0.00	0.11	Planned			

General Design Criteria and Elements

Functional Class	Service Life	Surface	Width	Design Speed	Critical Vehicle	Design Vehicle
Local	LI	Shot rock	14'	10	Log truck	Log truck

Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Condition)
0.00	0.11	2	1

Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

AFR&P Regs. "Active" status: Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

AFR&P Regs. "Inactive" status: Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

Operation Criteria

Highway Safety Act: No **Jurisdiction:** National Forest System ownership

Traffic Management Strategies

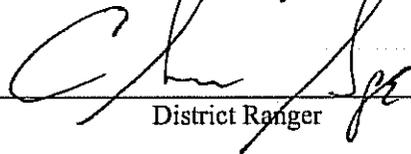
Encourage:	Hikers, bicycles
Accept:	High-clearance vehicles
Discourage:	N/A
Prohibit:	N/A
Eliminate:	Motorized vehicles on closed section

Travel Management Narrative

All newly constructed NFS road will be managed as a Maintenance Level 2 open to motorized vehicle traffic during the life of these timber sale activities. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

This road would be an intermittent service road (Maintenance Level 1) after timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures will remain in place with additional cross drains (water bars and dips) and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved _____


District Ranger

2/1/11

Date

Site Specific Design Criteria

Road 45889

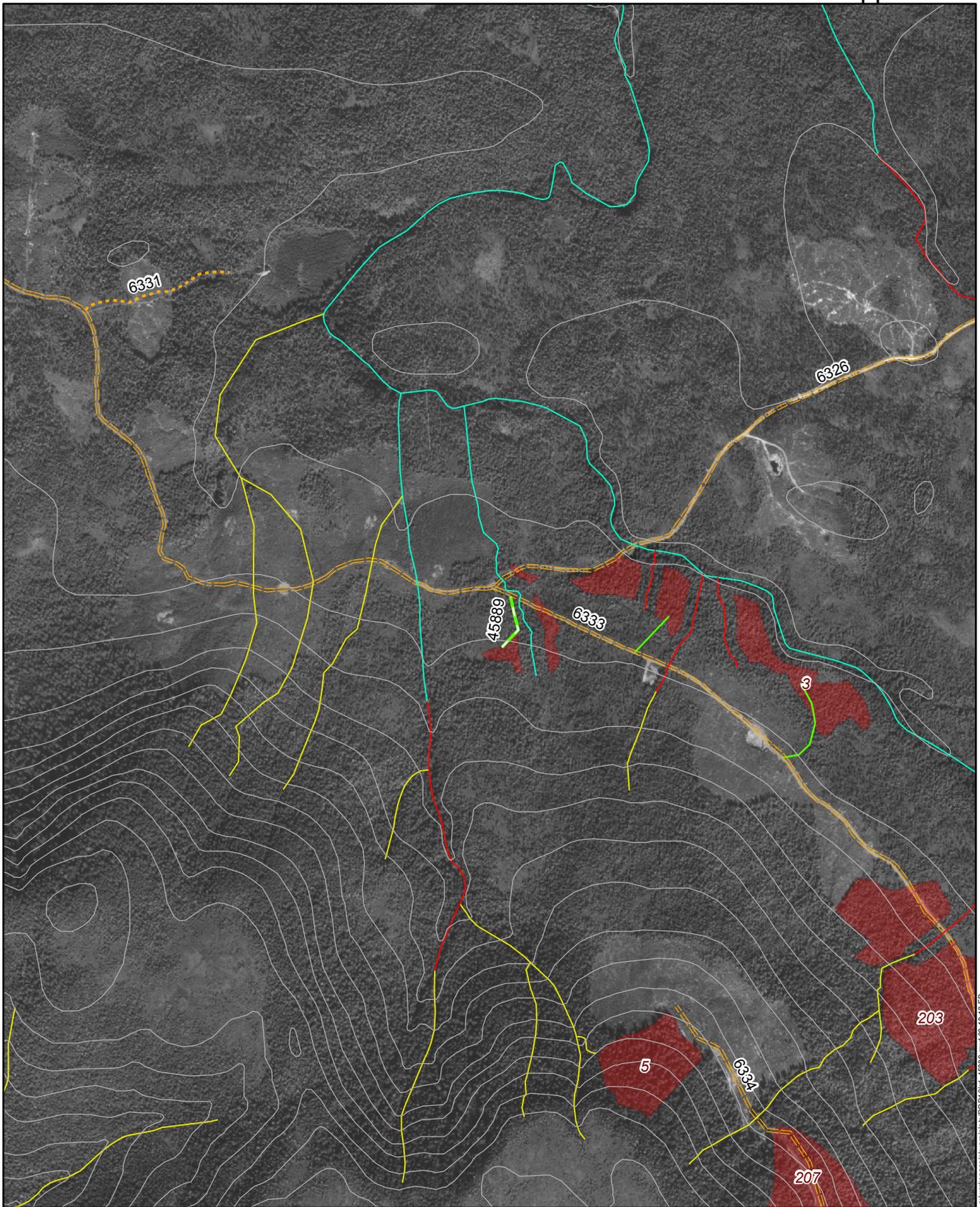
ROAD LOCATION: The road steadily gains elevation between the beginning point at the existing Road 6326 and the endpoint. The first 20+00 feet is a steady climb at 15 percent through timber with 40 to 50 percent sideslopes. The remainder of the road location is rolling along the contour with no appreciable gain in elevation with 40 to 50 percent sideslopes, also going through timber.

WETLANDS: The proposed road crosses about 779 feet of wetland. The wetland is muskeg/forested mosaic wetland and forested wetland. Minimize the road footprint through the wetlands and provide adequate hillslope drainage (33 CFR BMPs 1, 3). Wetlands were unavoidable on some portions of the location due to safety, engineering design constraints and consideration for other resources. Alternatives to the proposed location on wetlands would mean higher cost roads that may have impacted similar areas of wetlands (BMP 14.2). Overlay construction is recommended to minimize disturbance to the wetland and ensure hydraulic connectivity of the roaded wetland with the surrounding areas (BMP 12.5 and 14.17). This road meets silviculture exemption for 404 permitting through Army Corps of Engineers.

EROSION CONTROL: An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

ROCK PITS: Possible rock pit is located about 0.3 mile up Road 6333. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

STREAM CROSSINGS: There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.

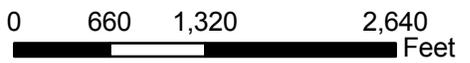


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Legend

- Proposed Unit
- Road Suitable for Passenger Vehicles (ML3)
- High Clearance Vehicle Road (ML2)
- Basic Custodial Care (Closed Road) (ML1)
- New NFS Designated Road Construction (ML2)
- Reconstructed Road
- New Temporary Road Construction
- Contours 100 ft.
- Stream Class I
- Stream Class II
- Stream Class III

Road 45889



Road Management Objective

Project		System		Land Use Designation	
Central Kupreanof EIS		Kake			
Route No	Route Name	Begin Terminus		End Terminus	
45886		6314 MP 3.15			
Begin MP	Length	Status	Map Quarter Quad	Photo year, roll, photos	
0.00	0.29	Planned			

General Design Criteria and Elements

Functional Class	Service Life	Surface	Width	Design Speed	Critical Vehicle	Design Vehicle
Local	LI	Shot rock	14'	10	Log truck	Log truck

Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Condition)
0.00	0.29	2	1

Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

AFR&P Regs. "Active" status: Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

AFR&P Regs. "Inactive" status: Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

Operation Criteria

Highway Safety Act: No **Jurisdiction:** National Forest System ownership

Traffic Management Strategies

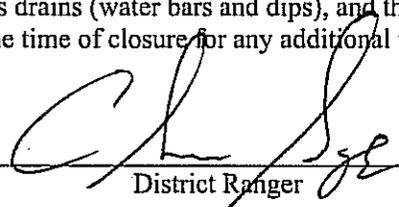
Encourage:	Hikers, bicycles
Accept:	High-clearance vehicles
Discourage:	N/A
Prohibit:	N/A
Eliminate:	Motorized vehicles on closed section

Travel Management Narrative

All newly constructed NFS road will be managed as a Maintenance Level 2 open to motorized vehicle traffic during the life of these timber sale activities. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

This road will be an intermittent service road (Maintenance Level 1) after timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures will remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved _____



District Ranger

2/1/11
Date

Site Specific Design Criteria

Road 45886

ROAD LOCATION: The road is located on fairly flat ground which slopes downhill at approximately 5 percent grade through timber. Road location will be adjusted to avoid first stream crossing if possible.

WETLANDS: The proposed road does not cross wetland.

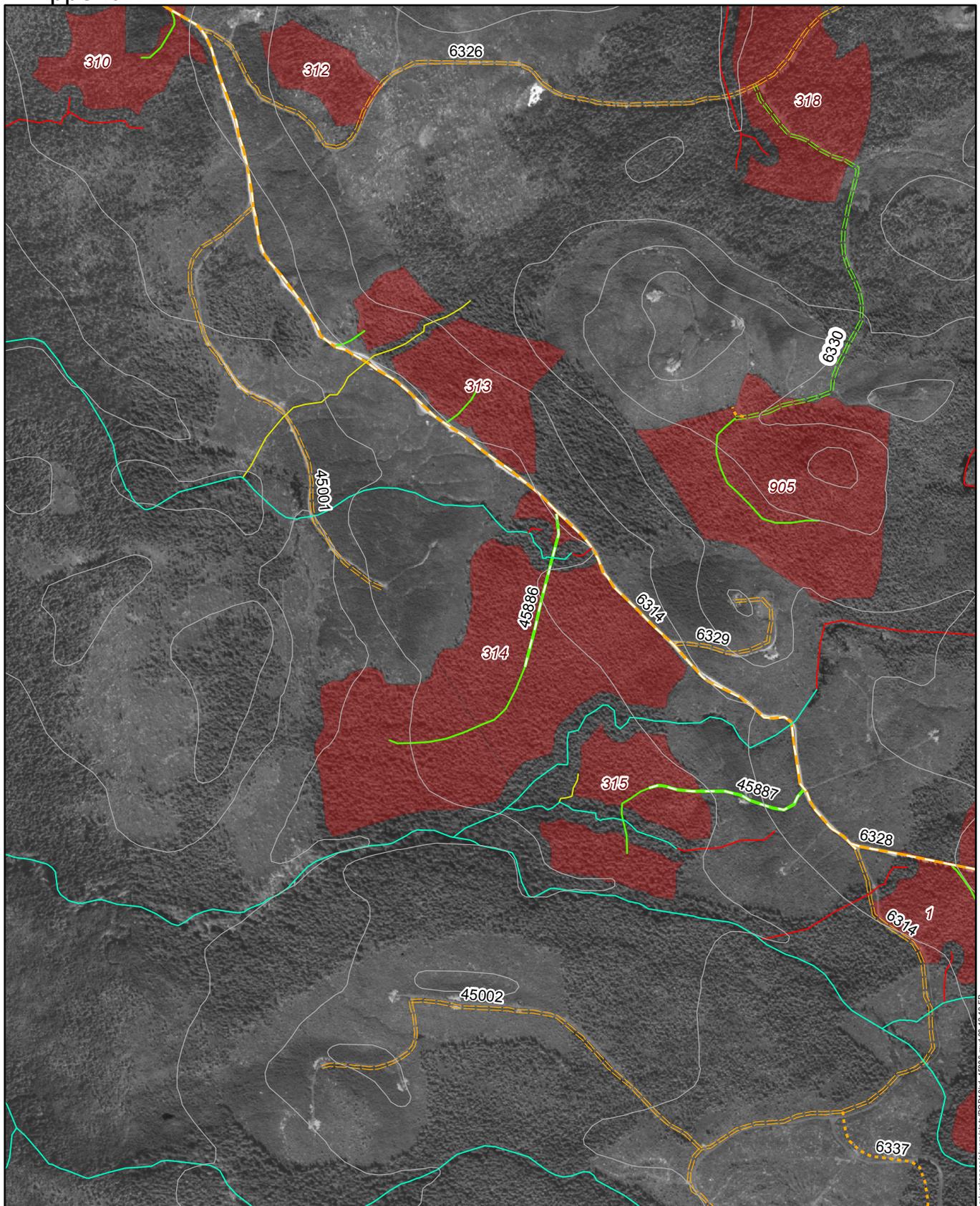
EROSION CONTROL: An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8)

ROCK PITS: Possible rock pit is located near the beginning of road at intersection of 6314 at MP 3.40. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

STREAM CROSSINGS:

1) MP: 0.09 AHMU: I Channel Type: MM1 BF Width: 2.9ft Incision: 1.5ft Gradient: 6 percent Structure: 30ft log stringer bridge

Narrative: Maintain fish migration and avoid diverting surface drainage channels. Timing restriction will be determined before implementation. (BMPs 14.6, 14.14, 14.17)



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Legend

- Proposed Unit
- Road Suitable for Passenger Vehicles (ML3)
- High Clearance Vehicle Road (ML2)
- Basic Custodial Care (Closed Road) (ML1)
- New NFS Designated Road Construction (ML2)
- Reconstructed Road
- New Temporary Road Construction
- Contours 100 ft.
- Stream Class I
- Stream Class II
- Stream Class III

Road 45886



Road Management Objective

Project		System	Land Use Designation	
Central Kupreanof EIS		Kake		
Route No	Route Name	Begin Terminus	End Terminus	
45887		6314 MP 3.65		
Begin MP	Length	Status	Map Quarter Quad	Photo year, roll, photos
0.00	0.31	Planned		

General Design Criteria and Elements

Functional Class	Service Life	Surface	Width	Design Speed	Critical Vehicle	Design Vehicle
Local	LI	Shot rock	14'	10	Log truck	Log truck

Intended Purpose/Future Use

Local road used for silvicultural activities, will be opened periodically, closed during times of inactivity.

Maintenance Criteria

Bmp	Emp	Operational Maintenance Level (Current Condition)	Objective Maintenance Level (Desired Condition)
0.00	0.31	2	1

Maintenance Narrative

Road will be maintained in "Active" status while road is open during timber haul; post timber haul road will be stored and maintained in "Inactive" status.

AFR&P Regs. "Active" status: Keep culverts, catch basins, ditches and ditch blocks functional. Grade as needed to maintain crown and running surface. Control roadside brush to maintain sight distance.

AFR&P Regs. "Inactive" status: Road is stored. Remove or bypass all drainage structures to restore natural drainage patterns, add water bars as needed to control runoff, and seed and fertilize disturbed soils. The road will be placed in a self maintaining state.

Operation Criteria

Highway Safety Act: No **Jurisdiction:** National Forest System ownership

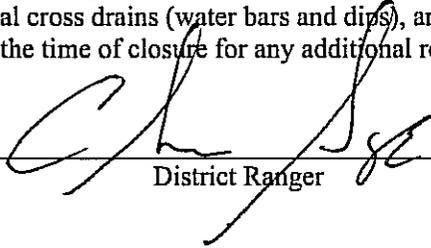
Traffic Management Strategies	Encourage:	Hikers, bicycles
	Accept:	High-clearance vehicles
	Discourage:	N/A
	Prohibit:	N/A
	Eliminate:	Motorized vehicles on closed section

Travel Management Narrative

All newly constructed NFS road will be managed as a Maintenance Level 2 open to motorized vehicle traffic during the life of these timber sale activities. These roads would be constructed or placed in a self maintaining hydrologic status. This would include the placement of drivable water bars or dips at all drainage culvert locations to direct water across the road in event that the culvert plugs. Other design elements like oversized culverts may be used to help reduce the need for routine drainage maintenance.

This road would be an intermittent service road (Maintenance Level 1) after timber harvest and physically blocked or natural vegetation allowed to eliminate motorized access. Drainage structures will remain in place with additional cross drains (water bars and dips), and the road would be considered stored. A review will be conducted at the time of closure for any additional resource concerns.

Approved _____


District Ranger

2/1/11
Date

Site Specific Design Criteria

Road 45887

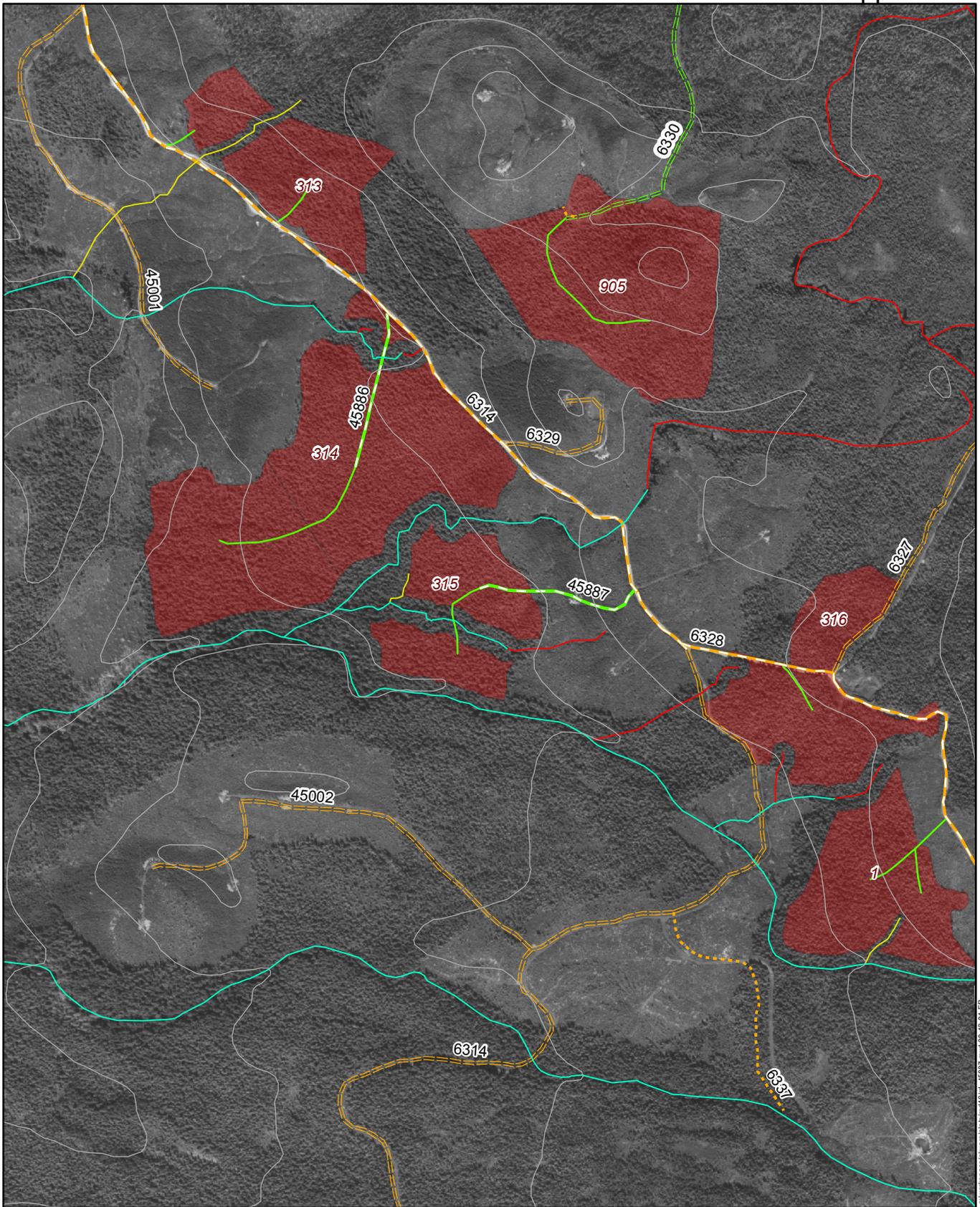
ROAD LOCATION: The start of the road follows an old decommissioned temporary road that is grown over. The road is located on fairly flat ground which slopes downhill at approximately 5 percent grade through timber.

WETLANDS: The proposed road does not cross wetland.

EROSION CONTROL: An erosion control plan for construction and maintenance will be developed by the contractor and approved by the Contracting Officer (BMP 14.5). All areas of organic or mineral soil exposed during construction shall be grass seeded and fertilized (BMP 12.17, 14.8).

ROCK PITS: Possible rock pit is located near the beginning of road at intersection of 6314 at MP 3.40. During periods of high rainfall (as defined in current Regional specifications), blasting operations will be suspended at quarries near potentially unstable sites where ground vibration may induce mass movement (BMP 14.6). Also during these periods, road construction that requires rock supplied from quarries shall be suspended in high risk areas on roads where rock hauling would increase the risk of mass failure (BMP 14.7). Follow BMP 14.18 for development and rehabilitation of rock sources.

STREAM CROSSINGS: There are no stream crossings that require site-specific design consideration for volume of flow, fish habitat, or other design complexity.

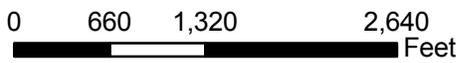


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Legend

- Proposed Unit
- Road Suitable for Passenger Vehicles (ML3)
- High Clearance Vehicle Road (ML2)
- Basic Custodial Care (Closed Road) (ML1)
- New NFS Designated Road Construction (ML2)
- Reconstructed Road
- New Temporary Road Construction
- Contours 100 ft.
- Stream Class I
- Stream Class II
- Stream Class III

Road 45887



Backside of map